AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Currently Amended) A tray transfer apparatus, comprising:

a transfer plate, the transfer plate including

a plurality of tray holders arranged and configured for the selective support and release of a tray, the tray including an array of pockets for receiving semiconductor devices;

a detecting substrate including an array of detecting means, the array of detecting means arranged and configured to detect the presence of more than ~~two~~ one semiconductor device[[s]] in one of the pockets of a supported tray by contacting at least one of the semiconductor devices in one of the pockets;

wiring means connecting the detecting means to an input/output terminal; and

driving means arranged and configured for controlled vertical and horizontal movement of the transfer plate.

2. (Original) The tray transfer apparatus according to claim 1, wherein:

the detecting means are detecting switches.

3. (Original) The tray transfer apparatus according to claim 2, wherein:

the detecting switches are mechanical contact type push-button switches, and

the detecting switches included in the array of detecting means are connected in a parallel configuration.

4. (Original) The tray transfer apparatus according to claim 2, wherein:

the transfer plate includes a top surface, a bottom surface and an array of installation holes extending through the transfer plate; and further wherein

the detecting switches extend through the installation holes and below a plane defined by the bottom surface of the transfer plate.

5. (Currently Amended) The tray transfer apparatus according to claim 4, wherein:

the detecting substrate ~~having~~ has an upper surface and a lower surface,

the detecting switches are arranged on the lower surface of the detecting substrate; and

the detecting substrate is mounted on the top surface of the transfer plate, thereby extending the detecting switches through the installation holes.

6. (Original) The tray transfer apparatus according to claim 5, wherein:

the detecting switches are mounted on the lower surface of the detecting substrate by a method selected from soldering and friction fit.

7. (Original) The tray transfer apparatus according to claim 1, wherein:

the transfer plate includes a rotatable member arranged at a periphery of the transfer plate and extending above and below the transfer plate;

a catch finger connected to a lower extension of the rotatable member; and

an actuation means connected to an upper extension of the rotatable member, whereby the rotatable member may be selectively rotated to move the catch finger between a supporting position and a releasing position.

8. (Original) The tray transfer apparatus according to claim 2, further comprising:

a control substrate for generating a control signal, the control signal corresponding to an activation status of the detecting switches.

9. (Original) The tray transfer apparatus according to claim 8, wherein:

the control substrate further includes a flashing circuit arranged and configured to generate flash signals corresponding to the activation status of the detecting switches.

10. (Original) The tray transfer apparatus according to claim 9, wherein:

the flashing circuit includes a NE555 circuit.

11. (Original) The tray transfer apparatus according to claim 8, wherein:

the control substrate includes a direct current to alternating current rectifier.

12. (Currently Amended) An automatic test handler comprising:

a plurality of tray stockers arranged and configured for receiving and positioning trays, the trays including an array of pockets with each pocket being sized and configured to receive and hold a semiconductor device;

a tray transfer unit including a transfer plate arranged and configured to transfer and position a supported tray, and a detecting substrate including an array of detectors~~detecting means~~, the array of detectors~~detecting switches~~ arranged and configured to indicate the presence of more than ~~two~~ one semiconductor device[[s]] in a pocket of the supported tray by contacting at least one of the semiconductor devices in the pocket, and a driver~~driving means~~;

a tester for performing electrical tests on the semiconductor devices;

a first chamber for establishing a first temperature condition in the semiconductor devices under which the semiconductor devices will be tested;

a second chamber for restoring the tested semiconductor device to the normal temperature;

a pick and place device arranged and configured for removing the semiconductor devices from the pockets and for placing the semiconductor devices into the pockets; and

a controller for controlling the stockers, the tester, the tray transfer unit, the pick and place device and the first and second chambers.

13. (Original) The automatic test handler according to claim 12, wherein:

the controller is incorporated within the tray transfer unit.

14. (Currently Amended) The automatic test handler of claim 12, wherein:

the controller generates a test stop signal corresponding to the activation status of the detectors~~detecting switches~~.

15. (Currently Amended) The automatic test handler according to claim 12, further comprising:

an alarm ~~means~~ for generating an alarm signal corresponding to the activation status of the detectors~~detecting switches~~.

16. (Currently Amended) The automatic test handler according to claim 12, further

comprising:

a control substrate arranged and configured for providing power to the detecting substrate and for generating flash signals according to the activation status of the detectors~~detecting switches~~.